

Environmental Protection Agency

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local, or Tribal agency responsible for regulating the landfill, plus any in-place waste not accounted for in the most recent permit. If the owner or operator chooses to convert from volume to mass to determine its capacity, the calculation must include a site-specific density.

Leachate recirculation means the practice of taking the leachate collected from the landfill and reapplying it to the landfill by any of one of a variety of methods, including pre-wetting of the waste, direct discharge into the working face, spraying, infiltration ponds, vertical injection wells, horizontal gravity distribution systems, and pressure distribution systems.

Solid waste has the meaning established by the Administrator pursuant to the Solid Waste Disposal Act (42 U.S.C.A. 6901 *et seq.*).

Working capacity means the maximum volume or mass of waste that is actually placed in the landfill from an individual or representative type of container (such as a tank, truck, or roll-off bin) used to convey wastes to the landfill, taking into account that the container may not be able to be 100 percent filled and/or 100 percent emptied for each load.

[75 FR 66473, Oct. 28, 2010, as amended at 78 FR 71970, Nov. 29, 2013]

TABLE HH-1 TO SUBPART HH OF PART 98—EMISSIONS FACTORS, OXIDATION FACTORS AND METHODS

Factor	Default value	Units
DOC and k values—Bulk waste option		
DOC (bulk waste)	0.20	Weight fraction, wet basis.
k (precipitation plus recirculated leachate ^a <20 inches/year)	0.02	yr ⁻¹
k (precipitation plus recirculated leachate ^a 20–40 inches/year)	0.038	yr ⁻¹
k (precipitation plus recirculated leachate ^a >40 inches/year)	0.057	yr ⁻¹
DOC and k values—Modified bulk MSW option		
DOC (bulk MSW, excluding inerts and C&D waste)	0.31	Weight fraction, wet basis.
DOC (inerts, e.g., glass, plastics, metal, concrete)	0.00	Weight fraction, wet basis.
DOC (C&D waste)	0.08	Weight fraction, wet basis.
k (bulk MSW, excluding inerts and C&D waste)	0.02 to 0.057 ^b	yr ⁻¹
k (inerts, e.g., glass, plastics, metal, concrete)	0.00	yr ⁻¹
k (C&D waste)	0.02 to 0.04 ^b	yr ⁻¹
DOC and k values—Waste composition option		
DOC (food waste)	0.15	Weight fraction, wet basis.
DOC (garden)	0.2	Weight fraction, wet basis.
DOC (paper)	0.4	Weight fraction, wet basis.
DOC (wood and straw)	0.43	Weight fraction, wet basis.
DOC (textiles)	0.24	Weight fraction, wet basis.
DOC (diapers)	0.24	Weight fraction, wet basis.
DOC (sewage sludge)	0.05	Weight fraction, wet basis.
DOC (inerts, e.g., glass, plastics, metal, cement)	0.00	Weight fraction, wet basis.
k (food waste)	0.06 to 0.185 ^c	yr ⁻¹
k (garden)	0.05 to 0.10 ^c	yr ⁻¹
k (paper)	0.04 to 0.06 ^c	yr ⁻¹
k (wood and straw)	0.02 to 0.03 ^c	yr ⁻¹
k (textiles)	0.04 to 0.06 ^c	yr ⁻¹
k (diapers)	0.05 to 0.10 ^c	yr ⁻¹
k (sewage sludge)	0.06 to 0.185 ^c	yr ⁻¹
k (inerts e.g., glass, plastics, metal, concrete)	0.00	yr ⁻¹
Other parameters—All MSW landfills		
MCF	1.	
DOC _F	0.5.	
F	0.5.	
OX	See Table HH-4	
DE	of this subpart.	
	0.99.	

^aRecirculated leachate (in inches/year) is the total volume of leachate recirculated from company records or engineering estimates divided by the area of the portion of the landfill containing waste with appropriate unit conversions. Alternatively, landfills that use leachate recirculation can elect to use the k value of 0.057 rather than calculating the recirculated leachate rate.

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^bUse the lesser value when precipitation plus recirculated leachate is less than 20 inches/year. Use the greater value when precipitation plus recirculated leachate is greater than 40 inches/year. Use the average of the range of values when precipitation plus recirculated leachate is 20 to 40 inches/year (inclusive). Alternatively, landfills that use leachate recirculation can elect to use the greater value rather than calculating the recirculated leachate rate.

^cUse the lesser value when the potential evapotranspiration rate exceeds the mean annual precipitation rate plus recirculated leachate. Use the greater value when the potential evapotranspiration rate does not exceed the mean annual precipitation rate plus recirculated leachate. Alternatively, landfills that use leachate recirculation can elect to use the greater value rather than assessing the potential evapotranspiration rate or recirculated leachate rate.

[75 FR 66473, Oct. 28, 2010, as amended at 78 FR 71970, Nov. 29, 2013]

TABLE HH-2 TO SUBPART HH OF PART 98—U.S. PER CAPITA WASTE DISPOSAL RATES

Year	Waste per capita ton/cap/yr	Year	Waste per capita ton/cap/yr
1950	0.63	1978	0.74
1951	0.63	1979	0.75
1952	0.63	1980	0.75
1953	0.63	1981	0.76
1954	0.63	1982	0.77
1955	0.63	1983	0.77
1956	0.63	1984	0.78
1957	0.63	1985	0.79
1958	0.63	1986	0.79
1959	0.63	1987	0.80
1960	0.63	1988	0.80
1961	0.64	1989	0.83
1962	0.64	1990	0.82
1963	0.65	1991	0.76
1964	0.65	1992	0.74
1965	0.66	1993	0.76
1966	0.66	1994	0.75
1967	0.67	1995	0.70
1968	0.68	1996	0.68
1969	0.68	1997	0.69
1970	0.69	1998	0.75
1971	0.69	1999	0.75
1972	0.70	2000	0.80
1973	0.71	2001	0.91
1974	0.71	2002	1.02
1975	0.72	2003	1.02
1976	0.73	2004	1.01
1977	0.73	2005	0.98
		2006	0.95
		2007	0.95
		2008	0.95
		2009 and all later years	0.95

[78 FR 71971, Nov. 29, 2013]

TABLE HH-3 TO SUBPART HH OF PART 98—LANDFILL GAS COLLECTION EFFICIENCIES

Description	Landfill Gas Collection Efficiency
A1: Area with no waste in-place	Not applicable; do not use this area in the calculation.
A2: Area without active gas collection, regardless of cover type	CE2: 0%.
A3: Area with daily soil cover and active gas collection	CE3: 60%.
A4: Area with an intermediate soil cover, or a final soil cover not meeting the criteria for A5 below, and active gas collection.	CE4: 75%.
A5: Area with a final soil cover of 3 feet or thicker of clay and/or geomembrane cover system and active gas collection.	CE5: 95%.
Area weighted average collection efficiency for landfills	$CE_{ave1} = (A2 \cdot CE2 + A3 \cdot CE3 + A4 \cdot CE4 + A5 \cdot CE5) / (A2 + A3 + A4 + A5).$

[74 FR 56374, Oct. 30, 2009, as amended at 75 FR 66474, Oct. 28, 2010]